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PATENT SPECIFICATION



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338,462

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COMPLETE SPECIFICATION.

Improvements relating to Means for Jointing the Ends of Tubular Elements or Pipes to Headers or the like.

We, THE SUPERHEATER COMPANY, LIMITED, of Bush House, Aldwych, London, W.C.2, a British Company, do hereby declare the nature of this invention (communicated to us by Compagnie des Surchauffeurs, of Rue la Bœtie 3, Paris, France, a Body Corporate organised and existing under the Laws of the French Republic) and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to means for jointing the ends of tubular elements or pipes to headers or the like. Whilst the jointing means according to this invention are more particularly intended for use in connecting the ends of the elements or pipes to the headers in steam superheaters operating under high pressures, it is to be understood that the invention is not restricted to high pressure superheaters as it may be employed with advantage in jointing the elements to the headers in superheaters operating under low, or relatively low, pressures, or in jointing pipes to headers or other vessels in apparatus other than steam superheaters.

The jointing means according to this invention is of the kind in which each pipe terminates in a jointing surface that bears against another jointing surface formed at the aperture in the wall of the header or other vessel to which the pipe is to be connected, appropriate clamping means being associated with the parts and with an annular abutment surface on the pipe whereby contact of the said jointing surfaces with one another is obtained and maintained.

The invention has for its object an improved joint or jointing means of the kind above indicated which shall be such that a fluid-tight joint will be ensured at high fluid pressures, and with this object in view the invention consists essentially in jointing means of the type indicated in which the pipe to be connected to the header or other vessel terminates in a portion having a relatively thin wall on which is formed a jointing

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surface adapted to contact with the jointing surface formed at the aperture in the wall of the header or vessel. In jointing means according to this invention the relatively thin wall which forms the jointing portion of the pipe at the extreme end thereof is such that it is relatively elastic and that pressure of fluid on the inside of the pipe at this portion will tend to expand the pipe and increase the pressure between the jointing surfaces.

The jointing surface on the pipe may be spherical and bear against a coned or spherical surface at the aperture in the wall of the header or vessel, or the jointing surface on the pipe may be coned and bear against a coned surface at such aperture. Where the pipe has a spherical surface bearing against a coned surface at the aperture in the wall of the header or other vessel, the said spherical surface has a radius only slightly greater than the radius of the bore of the pipe, and the coned surface formed at the aperture in the wall of the header or vessel has only a slight inclination to the axial centre line of said aperture.

Further, in jointing means according to this invention, the surface of the portion or member of the clamping means which bears against the spherical surface of the annular abutment on the pipe may be of conical formation. In the case of an element the jointing surface of which is spherical, the spherical surface of the said abutment may be concentric with, but having a radius greater than the radius of, the spherical jointing surface on the element.

As an example of an embodiment of the invention there is illustrated in the accompanying drawings jointing means according to the invention in which the element has a spherical jointing surface and the jointing surface at the aperture in the wall of the header or vessel is coned, and in the drawings:—

Fig. 1 is a sectional view of a portion of the wall of a header or vessel and of the end portion of a pipe jointed to the header or vessel, and

Fig. 2 shows two pipe ends jointed to

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1 SHEET

[This Drawing is a reproduction of the Original on a reduced scale]

FIG.1.

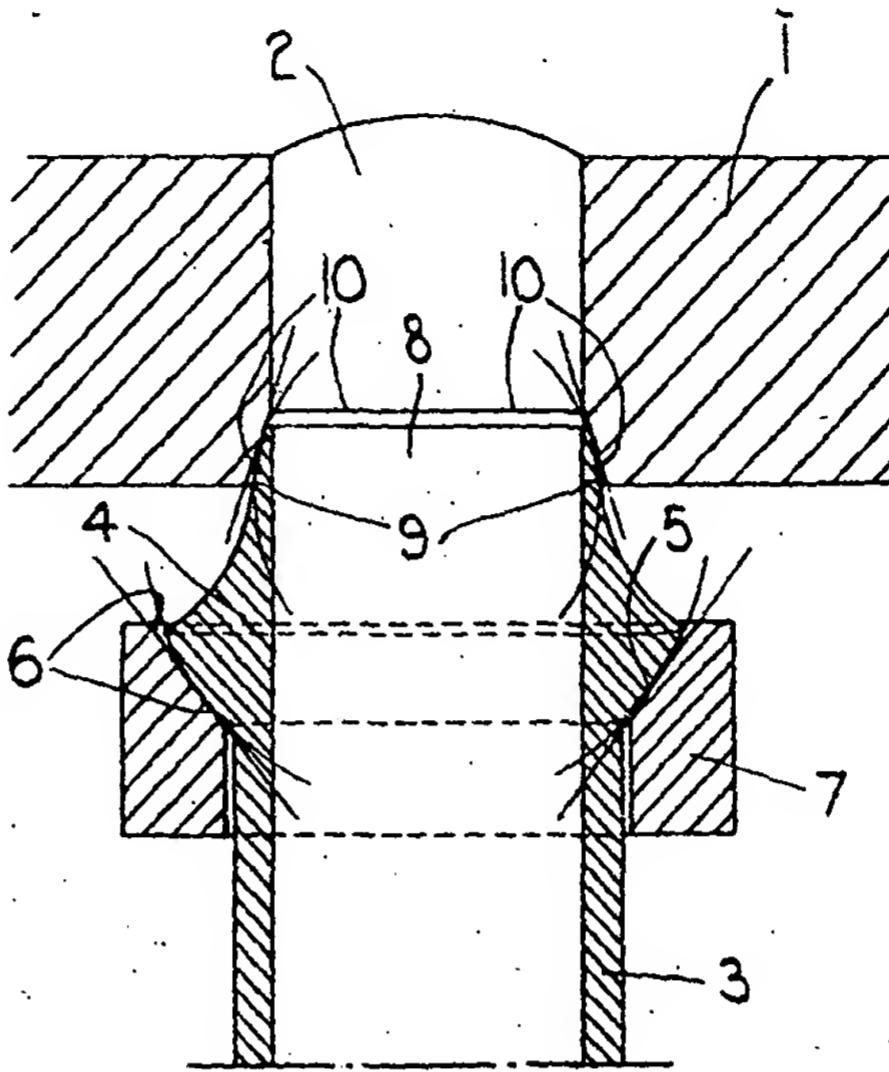
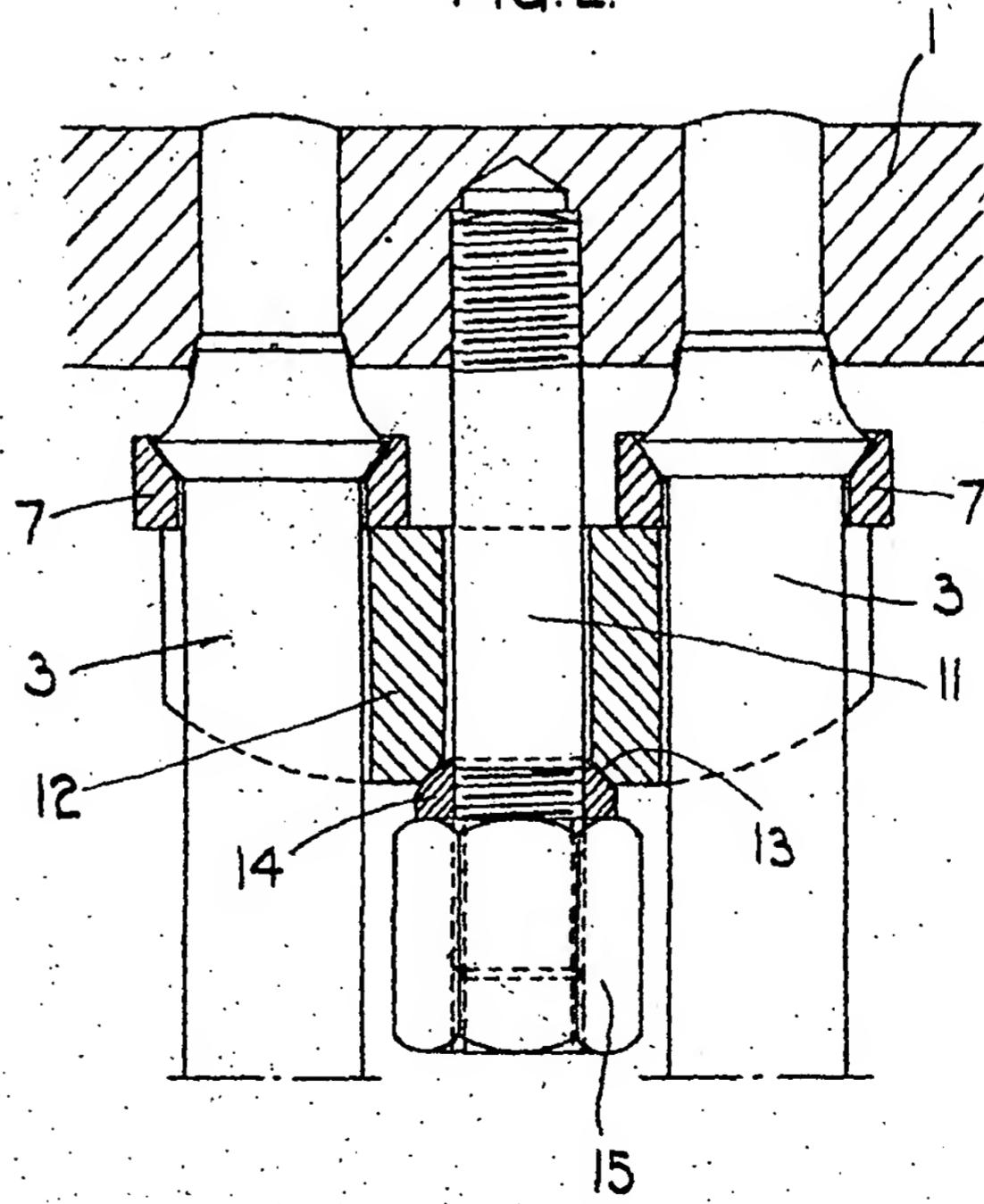


FIG.2.



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